



Arboricultural
Method Statement
of
Tree Protection Measures

**Manchester Enterprise Academy
Simonsway
Manchester**

Project No. AMS.13458.01

22nd April 2022

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SCHEDULE OF TREE PROTECTION MEASURES

Tree Protection Phase	Arboricultural Impact	Tree Protection Methodology		Documented by
1 Schedule of Tree Works	Undertake approved tree works.	Arboricultural Method Statement	2.1 & Appendix 1	Name:
		Tree Protection Plan	Phase 1	Date:
2 Temporary Tree Protection Barriers	Install temporary protective fencing and ground protection around retained trees prior to construction activity.	Arboricultural Method Statement	Sections 2.3, 2.4 & Appendix 2	Name:
		Tree Protection Plan	Phase 2	Date:
3 Construction Activity	Undertake construction of the approved development.	Arboricultural Method Statement	Sections 2.5 to 2.8	Name:
		Tree Protection Plan	Phase 3	Date:

CONTENTS

1. INTRODUCTION	1
2. TREE PROTECTION MEASURES	2
2.1. Schedule of Tree Works	2
2.2. Root Protection Areas	2
2.3. Install temporary tree protection measures	2
2.4. Temporary ground protection	3
2.5. Movement on site	3
2.6. Services within the RPA	3
2.7. Hard surfaces within the RPA – Minimum-Dig.....	4
2.8. Post development landscaping	5
 DRAWING. TREE PROTECTION PLANS.....	 7
 APPENDIX 1. SCHEDULE OF TREE WORKS	 8
APPENDIX 2. PROTECTIVE BARRIER CONSTRUCTION.....	9

1. Introduction

- 1.1.1. This Arboricultural Method Statement highlights the necessary tree protection measures to ensure good practice (in accordance with *British Standard 5837: 2012 Trees in relation to design, demolition and construction*) in relation to the protection of trees during the proposed development works at Manchester Enterprise Academy, Simonsway, Manchester.
- 1.1.2. The construction of a new educational building with associated car parking is proposed. The proposed development layout has been provided by our client and is the basis for the *Tree Protection Plan*, which can be found at the rear of this report.
- 1.1.3. A ground level inspection was undertaken by Godwins Arboricultural Limited on 13th April 2022. As recommended by *BS5837*, the position of all trees within the site with a stem diameter of 75 mm or more, measured at 1.5 m above highest adjacent ground level are recorded. The position of trees with an estimated stem diameter of 75 mm or more that overhang the site or are located beyond the site boundaries within a distance of up to 12 times their estimated stem diameter were also recorded. For individual trees the crown spread taken at four cardinal points; for tree groups the overall extent of the canopy was recorded.
- 1.1.4. The tree protection measures have been divided into three phases, and each phase must be documented by a responsible and competent person. It is recommended that documentation takes the form of photographic evidence, which is recorded in conjunction with the *Schedule of Tree Protection Measures* table at the front of this report.

2. Tree Protection Measures

2.1. Schedule of Tree Works

- 2.1.1. The first operation on site is to undertake the proposed tree works, which includes the removal of **G2**, **G3** and 2x trees from **G4** to enable development, and the removal of **T8** due to its poor condition.
- 2.1.2. Care should be taken to ensure during remedial work that damage to the retained trees and disturbance to the RPA is avoided. All tree works, as described in *Appendix 1*, should be carried out in accordance with *BS 3998: 2010 Recommendations for tree work*, and after permission has been granted to do so by the local planning authority. It is essential that those appointed to undertake any tree works carry out adequate checks to ensure that no statutory laws are contravened during tree work operations.
- 2.1.1. The proposed tree works are detailed at *Appendix 1* and shown on the *Tree Protection Plan*. Once complete the *Schedule of Tree Protection Measures* at the front of this report must be signed off by the relevant person.

2.2. Root Protection Areas

- 2.2.1. The tree Root Protection Area (RPA) is a layout design tool indicating the area around a tree that, along with the tree stem and branches, must be considered during development. The protection of the roots and soil structure within the RPA should be treated as a priority. The RPA of each tree or group is marked on the *Tree Protection Plan* at the rear of this report as an orange circle.

2.3. Install temporary tree protection measures

- 2.3.1. Once the tree works are complete, temporary protective fencing barriers must be put in place as detailed at *Appendix 2 (Figure 1)* and located as shown on the *Tree Protection Plan* prior to any construction activity (including demolition of existing buildings. This fenced-off area is a Construction Exclusion Zone (CEZ).
- 2.3.2. All-weather notices stating “CONSTRUCTION EXCLUSION ZONE – NO ACCESS” should be fixed to the barriers to ensure that all construction personnel are aware and adhere to the limitations that apply to the protected area. No hardcore, rubble of soil from groundworks should be located within the protective barriers. No ground level changes (raising/lower of existing levels) are allowed within the CEZ.
- 2.3.3. The removal of part of the protective fencing is not permitted without prior agreement by either the local planning authority or an arboricultural consultant. Temporary tree protection measures may only be altered or removed as detailed within this report, or when approved by either the local planning authority or an arboricultural consultant.

- 2.3.4. Once the tree protection barriers have been installed, the *Schedule of Tree Protection Measures* at the front of this report must be signed off by the relevant person. Photographic evidence of the installed barriers must be taken and documented by a responsible and competent person (i.e. the site manager) prior to any construction activity.
- 2.3.5. Only when the development phase is complete and the site machinery has been removed, the local planning authority should be invited to inspect the site to give approval for the removal of the tree protection measures.

2.4. Temporary ground protection

- 2.4.1. Ground protection in the form of ridged material, suitable to distribute the weight of any potential traffic, should be installed over exposed areas of RPAs from trees that extend beyond the protective barrier until the footpath and covered seating area is constructed. British Standard BS5837 recommends that:

The ground protection might comprise one of the following:

- a) for pedestrian movements only, a single thickness of scaffold boards placed either on top of a driven scaffold frame, so as to form a suspended walkway, or on top of a compression-resistant layer (e.g. 100 mm depth of woodchip), laid onto a geotextile membrane;*
- b) for pedestrian-operated plant up to a gross weight of 2 t, proprietary, inter-linked ground protection boards placed on top of a compression-resistant layer (e.g. 150 mm depth of woodchip), laid onto a geotextile membrane;*
- c) for wheeled or tracked construction traffic exceeding 2 t gross weight, an alternative system (e.g. proprietary systems or pre-cast reinforced concrete slabs) to an engineering specification designed in conjunction with arboricultural advice, to accommodate the likely loading to which it will be subjected.*

2.5. Movement on site

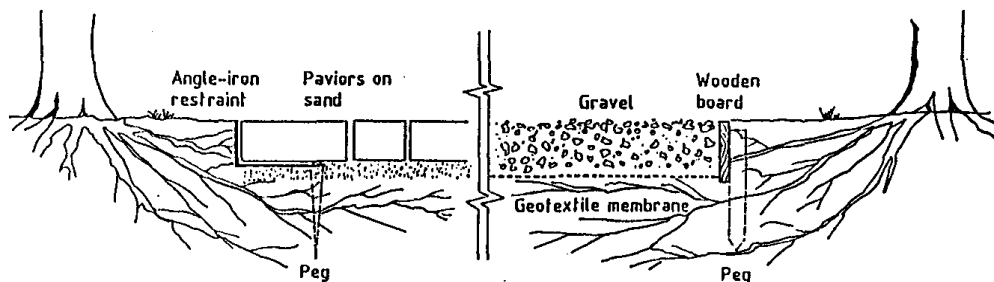
- 2.5.1. Care must also be taken to prevent contamination within the RPAs from chemical spillages, including petrol, diesel and oils. Cement mixers and toxic materials should not be permitted close to trees. Materials that may contaminate soil e.g. concrete mixings and diesel oil should not be discharged within 15m of a retained tree, or in locations where it may run towards an RPA. Fires should not be lit and notice boards, telephone cables or other services should not be attached to any tree part.

2.6. Services within the RPA

- 2.6.1. Wherever possible, under-ground services should be routed outside of the RPA of retained trees, and plans showing the proposed routeing should be drawn up. Where excavations may be required hand-held tools might be acceptable for shallow service runs.

2.7. Hard surfaces within the RPA – Minimum-Dig

- 2.7.1. It is recommended that the proposed footpath and covered seating area within the RPA of **T6** are constructed in a manner that would not cause the adjacent tree any long-term harm. In this instance, it is recommended that a '*Minimum-Dig*' method is used.
- 2.7.2. Following the removal of temporary ground protection, excavations within the RPA *must only* be undertaken by hand to establish the presence of roots. Any tree roots exposed within the RPA must be left as intact as careful digging with hand tools will allow, avoiding the use of heavy machinery within the RPA.
- 2.7.3. No more than 100mm of soil should be removed before the ground is inspected for roots. Depending on the presence of roots it may then be acceptable to remove a further 50mm of soil down to the required depth.
- 2.7.4. During excavations, roots smaller than 25mm diameter may be pruned back, making a clean cut with a suitable sharp tool (e.g. bypass secateurs or handsaw), except where they occur in clumps. Roots occurring in clumps or of 25mm diameter and over should be severed only following consultation with an arboriculturist; as such roots might be essential to the tree's health and stability. Any tree roots exposed within the RPA must be left as intact as careful digging with hand tools will allow, avoiding the use of heavy machinery within the RPA.
- 2.7.5. Any roots exposed during excavations should immediately be wrapped or covered in damp hessian to prevent desiccation and to protect them from rapid temperature changes. Any wrapping should be removed prior to backfilling, which should take place as soon as possible. Prior to backfilling, retained roots should be surrounded with topsoil or un-compacted sharp sand (builders' sand should not be used because of its high salt content, which is toxic to tree roots), or other loose inert granular fill, before soil or other suitable material is replaced.



Example of a light duty drive constructed using the **Minimum Dig Method**.

2.8. Post development landscaping

- 2.8.1. Any ground works or excavations required to implement landscaping proposals must be undertaken by hand within the RPA of any retained tree. Machinery such as rotovators must not be used within an RPA as this will sever tree roots and may lead to the decline of the affected tree.
- 2.8.2. The use of herbicides within the RPA of retained trees should be avoided. If they are to be used then consideration must be given to the using only those herbicides that will not affect the underlying tree roots system.

Client: Manchester Enterprise Academy
Project No: AMS.13457
Issue: 01

Date Issued: 22nd April 2022
Status: FINAL

Signed for on behalf of Godwins Arboricultural Limited:

R Godwin

Robert Godwin MSc MArborA.
Arboriculturist

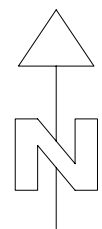
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Drawing. Tree Protection Plans

TREE PROTECTION MEASURES
PHASE 1
TREE WORKS



T	G	H	W	S
INDIVIDUAL TREE	GROUP OF TREES	HEDGEROW	WOODLAND GROUP	SHRUB

	EXISTING LAYOUT
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PROPOSED TREE WORKS

	TREE PROPOSED FOR RETENTION
	TREE PROPOSED FOR PRUNING
	TREE PROPOSED FOR REMOVAL (ARBORICULTURAL REASONS)
	TREE PROPOSED FOR REMOVAL (TO ENABLE DEVELOPMENT)

Please refer to Appendix 1 of the Arboricultural Method Statement for details on tree condition and proposed works.

	ROOT PROTECTION AREA (RPA)
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The Root Protection Area (RPA) is a layout design tool highlighting the underground tree constraints. Along with the tree stem and branches the RPA must be considered prior to and during development.

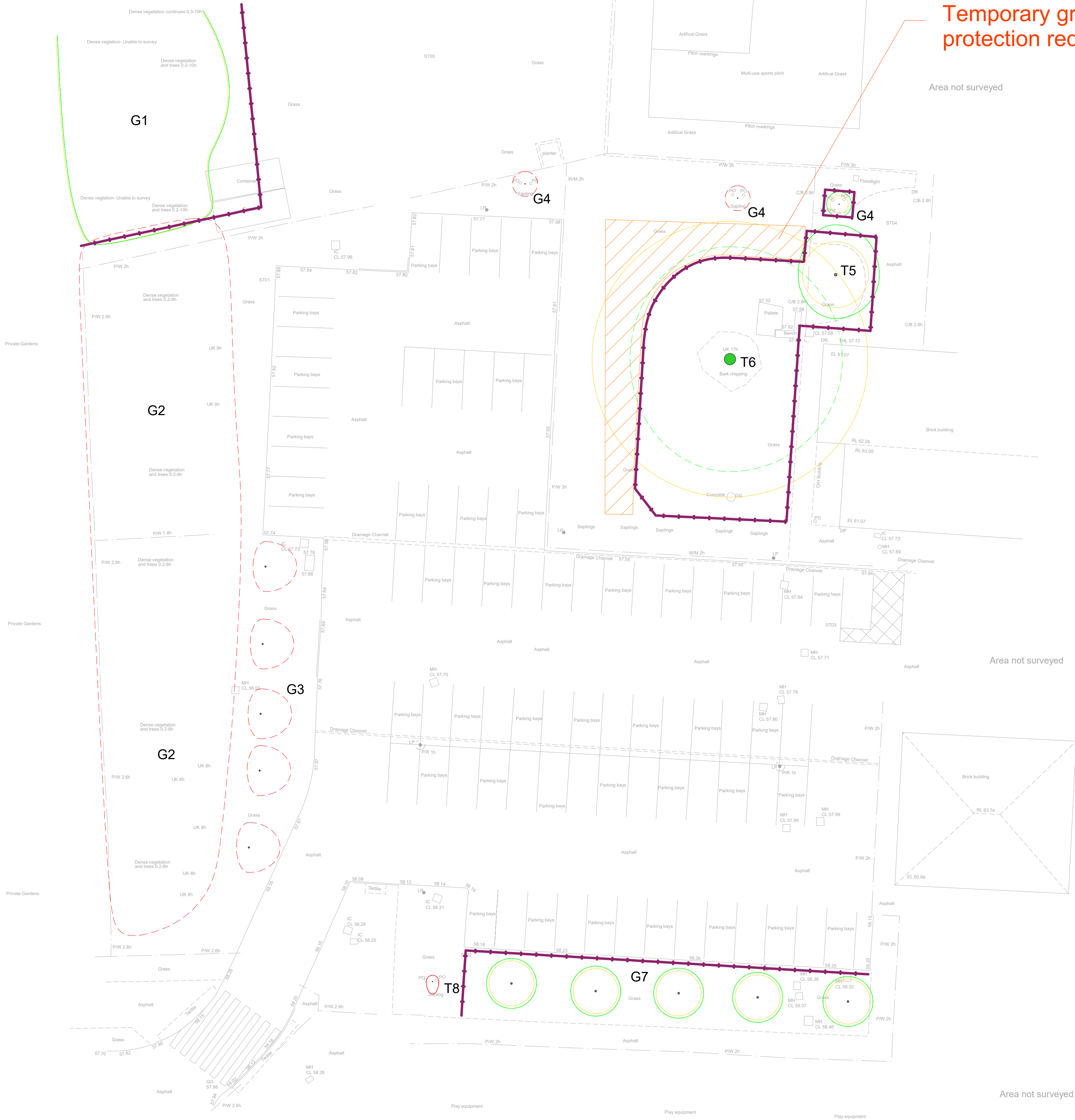
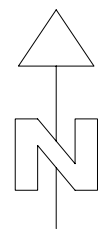
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PROJECT TITLE: MEA, Simonsway, Manchester		
DRAWING TITLE: TREE PROTECTION PLAN	SCALE: 1:200 @ A1	ISSUE DATE: 22.04.22
DRAWING NUMBER: TPP.13458	REVISION: .01	DRAWN BY: RG

TREE PROTECTION MEASURES
PHASE 2
TEMPRORARY PROTECTION



Temporary ground
protection required.

T	G	H	W	S
INDIVIDUAL TREE	GROUP OF TREES	HEDGEROW	WOODLAND GROUP	SHRUB

	EXISTING LAYOUT
--	-----------------

PROPOSED TREE WORKS

	TREE PROPOSED FOR RETENTION
	TREE PROPOSED FOR PRUNING
	TREE PROPOSED FOR REMOVAL (ARBORICULTURAL REASONS)
	TREE PROPOSED FOR REMOVAL (TO ENABLE DEVELOPMENT)

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	ROOT PROTECTION AREA (RPA)
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The Root Protection Area (RPA) is a layout design tool highlighting the underground tree constraints. Along with the tree stem and branches the RPA must be considered prior to and during development.

TREE PROTECTION MEASURES

	TEMPORARY PROTECTIVE BARRIER Refer to Appendix 2 of the Arboricultural Method Statement for specification details.
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	RPA WITHIN PROPOSED WORKING AREA
T6	

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1:200 @ A1

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22.04.22

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TPP.13458

REVISION:
.01

DRAWN BY:
RG



	EXISTING LAYOUT
	PROPOSED LAYOUT

	TREE PROPOSED FOR RETENTION
	TREE PROPOSED FOR PRUNING
	T6
	TREE PROPOSED FOR REMOVAL (ARBORICULTURAL REASONS)
	T8
	TREE PROPOSED FOR REMOVAL (TO ENABLE DEVELOPMENT)
	G2, G3 & G4 (x2)

	ROOT PROTECTION AREA (RPA)
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	TEMPORARY PROTECTIVE BARRIER Refer to Appendix 2 of the Arboricultural Method Statement for specification details.
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Appendix 1. Schedule of Tree Works

Tree No.	Species	Age	Stems at 1.5m	Stem Dia (mm)	Height (Crown Hgt) (m)	FSB (D) (m)	Branch Spread (m)				Observations	Cond	Life Exp	Tree Works Required to Enable Development	Root Protection Area (RPA)		Retention Category
							N	E	S	W					Radius (m)	Area (m ²)	
G 1	Acer campestre (Field Maple), Crataegus monogyna (Hawthorn), Quercus robur (Common Oak), Betula pendula (Silver Birch), Prunus spinosa (Blackthorn), Corylus avellana (Hazel)	Young to semi-mature	3	150	10(0)	0(E)	3	3	3	3	Multi-stemmed from ground level. Limited inspection - restricted access. Limited inspection - dense undergrowth. Individuals crowns restricted by group. Linear boundary group.	Good to Fair	40+	No action required.	3.1	30.6	B
G 2	Acer campestre (Field Maple), Crataegus monogyna (Hawthorn), Quercus robur (Common Oak), Betula pendula (Silver Birch), Aesculus hippocastanum (Horse Chestnut), Corylus avellana (Hazel)	Young to semi-mature	3	150	10(0)	0(E)	3	3	3	3	Multi-stemmed from ground level. Limited inspection - dense undergrowth. Limited inspection - dense ivy on stem/base. Individuals crowns restricted by group. Linear boundary group.	Good to Fair	40+	Remove to enable the construction of the proposed development.	3.1	30.6	B
G 3	Acer platanoides (Norway Maple)	Young	1	120	7(3)	3(E)	2	2.5	2	1	Occasional pruning wounds. Crown suppressed by adjacent trees. Linear group. Mower/trimmer damage at base.	Good to Fair	40+	Remove to enable the construction of the proposed development.	1.4	6.5	C
G 4	Acer campestre (Field Maple)	Young	1	60	3.5(1.5)	1.5(S)	1	1	1	1	Balanced crowns. Staked stem.	Good to Fair	40+	Remove 2x trees to enable the construction of the proposed development.	0.7	1.6	C
T 5	Quercus rubra (Red Oak)	Semi-mature	1	220	9(3.5)	3.5(W)	4	3.5	3.5	3	Asymmetrical crown. Limited inspection - restricted access.	Good to Fair	40+	No action required.	2.6	21.9	C
T 6	Quercus robur (Common Oak)	Mature	1	920	17(4)	4(W)	9	9	9	8	Asymmetrical crown. Occasional pruning wounds.	Good to Fair	40+	Crown lift northern canopy to ensure 1.5m clearance from the proposed building.	11.0	383.0	A
G 7	Quercus ilex (Holm Oak)	Young	1	150	6(2)	2(N)	2	2	2	2	Linear group. Balanced crowns.	Good to Fair	40+	No action required.	1.8	10.2	C
T 8	Sorbus aucuparia (Rowan)	Young	1	50	3.5(2)	2(N)	0.5	0.5	1	0.5	In decline with limited future.	Poor	<10	Remove for arboricultural reasons.	0.6	1.1	U

Appendix 2. Protective Barrier Construction

- A2.1 The default specification for protective barriers should consist of a vertical and horizontal scaffold framework, well braced to resist impacts, as illustrated below. The vertical tubes should be spaced at a *maximum* interval of 3 m and driven securely into the ground. Onto this framework, welded mesh panels should be securely fixed. Care should be exercised when locating the vertical poles to avoid underground services and, in the case of the bracing poles, also to avoid contact with structural roots.

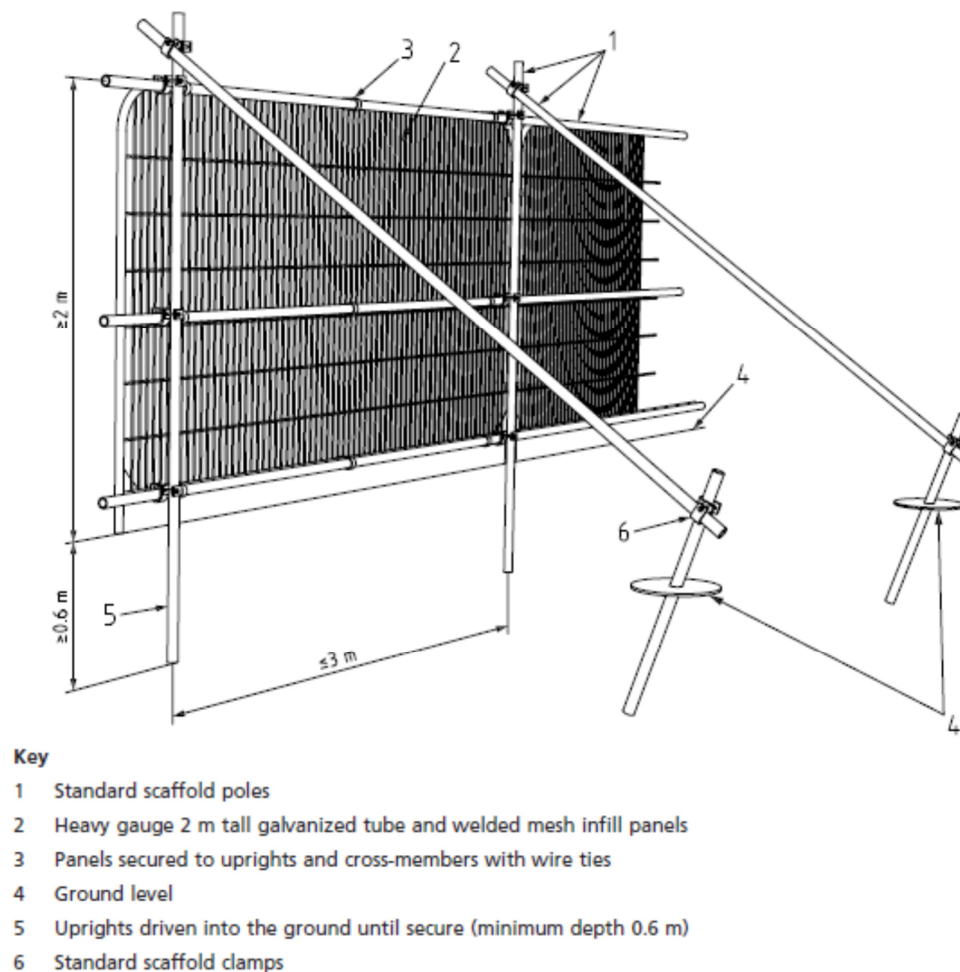


Figure 1. Default protective fencing barrier as detailed in *BS 5837: 2012*.

- A2.2 Where the site circumstances and associated risk of damaging incursion into the RPA do not necessitate the default level of protection, an alternative specification may be adopted. This system includes 2 m tall welded mesh panels on rubber or concrete feet, secure enough to provide an adequate level of protection from cars, vans, pedestrians and manually operated plant. In such cases, the fence panels should be joined together using a minimum of two anti-tamper couplers, installed so that they can only be removed from inside the fence. The distance between the fence couplers should be at least 1 m and should be uniform throughout the fence. The panels should be supported on the inner side by stabilizer struts, which should normally be attached to a base plate secured with ground pins (Figure 2a). Where the fencing is to be erected on retained hard surfacing or it is otherwise unfeasible to use ground pins, e.g. due to the presence of underground services, the stabilizer struts should be mounted on a block tray (Figure 2b).

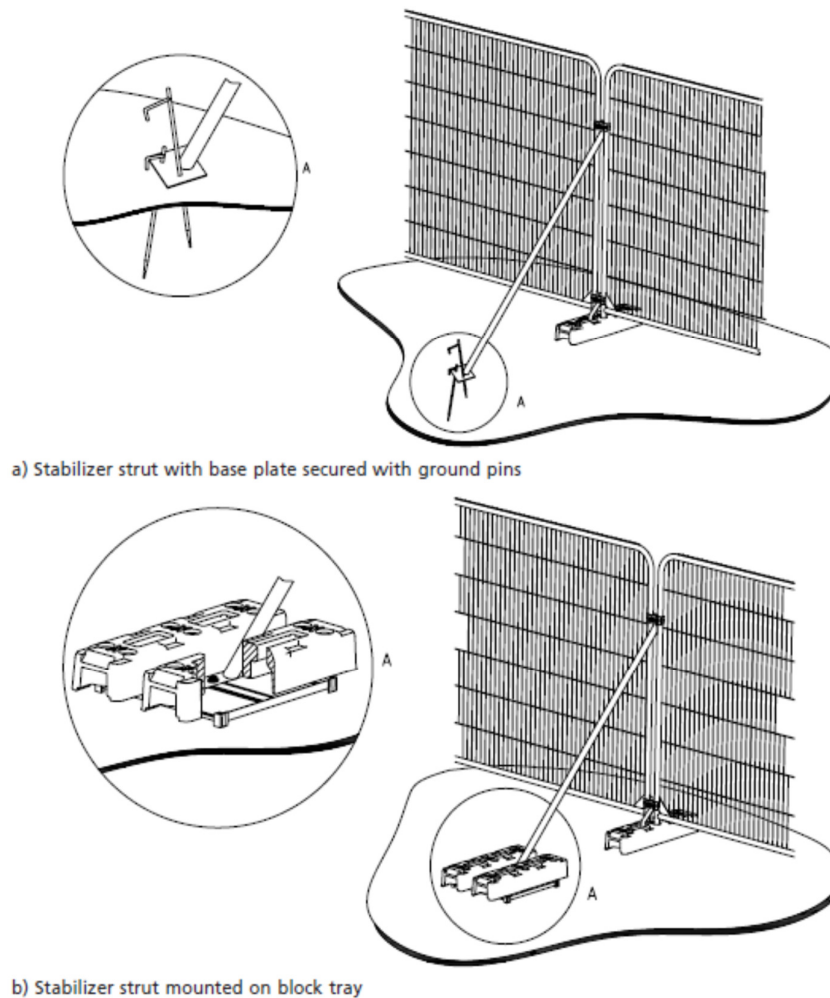


Figure 2. Examples of above-ground stabilizing systems

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